REMARKS

Interview Summary Record

Applicants thank Examiner Anderson and Supervisor Utech for the interviews of March 26, 2002 and April 30, 2002. The arguments presented by Applicants' representative during the interviews have been incorporated into the remarks hereinbelow.

Status of the Claims

Claims 1-10 are pending in this application. No claims have been canceled. Claims 2-12 have been added. Claim 1 has been amended to particularly and distinctly claim the subject matter of the invention. Particularly, Applicants amend claim 1 to incorporate the encapsulating step with B_2O_3 and to recite that the nucleation occurs on the surface of the melt. No new matter has been added by the new claims and amendments. Support is found in the example in the specification and figures 1A and 1B.

Rejections under 35 USC 102(b)

The Examiner rejects claim 1 as anticipated by Fukuda et al. USP 5,554,219 (Fukuda '219). Applicants traverse the rejection and respectfully request the withdrawal thereof.

The present invention is directed to a process for producing a semiconductor single crystal where the raw material is placed into a crucible, encapsulating the material, melting the material and

promoting a nucleation on the surface of a raw material melt by leaving a solid raw material in a part of the raw material melt, and gradually solidifying the melt without a seed crystal.

Fukuda '219 discloses a method of producing a single-crystal bulk ZnSe from a melt by a high-pressure melt technique. Fukuda '219 also discloses a process where a large number of nuclei are generated and then a single crystal is obtained by selective growth. Fukuda '219 fails to disclose a method of producing a single-crystal bulk ZnSe which does not use a seed crystal and where nucleation occurs on the surface of the melt and where the raw material is encapsulated. Fukuda '219 also fails to disclose growing a single crystal from a single nucleus.

Please see the attached diagram (the same diagram faxed to the Examiner for the interview of April 30, 2002), which compares the fifth aspect of the invention of Fukuda '219 to the present invention. It is clear from the diagram that the fifth aspect of Fukuda '219 is distinct from the present invention.

As such, Applicants submit that the present invention is not anticipated by Fukuda '219 and the rejection should be withdrawn.

Conclusion

As Applicant has addressed and overcome all rejections, Applicant respectfully requests that the claims be allowed.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Kecia Reynolds (Reg. No. 47,021) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made
Diagram of 5th Embodiment of Fukuda '219 and Present Invention

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claim 1 is amended as follows:

1. (Amended) A process for producing compound semiconductor single crystal, comprising the steps of:

a) placing [putting] a compound semiconductor raw material into a crucible;

b) encapsulating the raw material;

c) setting the crucible in a vertical type of a heating furnace to heat the raw material;

d) melting the raw material [by a heater];

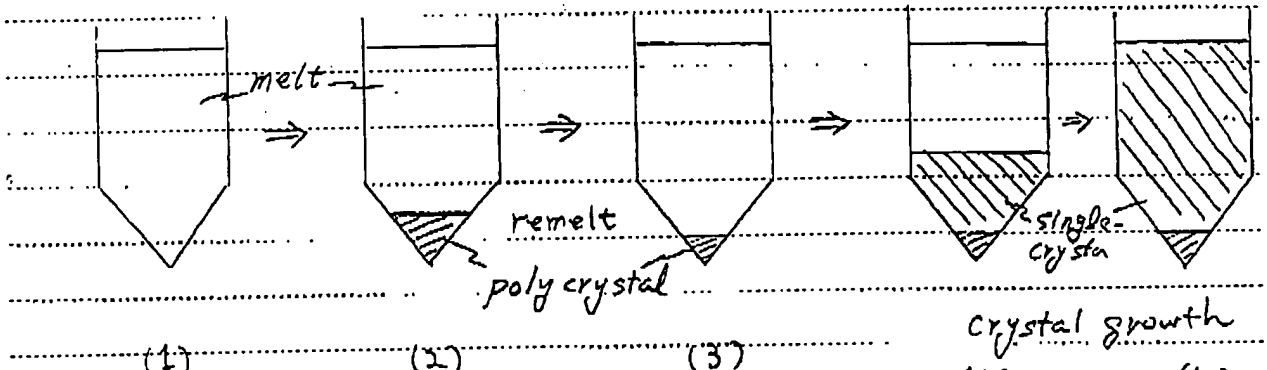
e) promoting a nucleation on a surface of a raw material melt by leaving a solid raw material in a part of the raw material melt;

f) solidifying the raw material gradually from the surface of the raw material melt without a seed crystal; [,]and

growing a crystal by using a nucleus generated by the nucleation.

Claims 2-12 are added.

• a fifth method of the Fukuda invention



• our invention